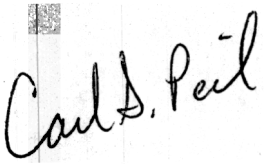
Montana Department of Transportation
Helena, Montana 59620-1001

Memorandum

To: Distribution

From: Carl S. Peil, P.E.
Preconstruction Engineer



Date: October 24, 2002

Subject: Public Interest Finding on Guardrail
Terminal Sections and Impact Attenuators

Attached is the Public Interest Finding for Guardrail End Treatments and Rigid Barrier Termination.

These products are approved for use in all projects. These devices will be included in the updated Detailed Drawings which will be released in the near future. Until the Detailed Drawings are released, the devices will be included by special provision. In the case of box beam rail, the optional terminal sections will require details in the plans and special provisions.

The contractors are still required to provide the manufacturer's installation instructions with each device prior to installation.

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Attachment

Distribution with attachment:

Ron Williams	Mark Wissinger	Joe Kolman
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serving you with pride

Montana Department of Transportation
2701 Prospect Avenue
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Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

March 1, 2002

Janice Weingart Brown
Division Administrator
Federal Highway Administration
301 South Park, Drawer 10056
Helena, MT 59626-0056

Subject: Public Interest Finding
For Guardrail End Treatments and Rigid Barrier Termination

In an effort to improve safety and find cost-effective products we have reviewed an extensive list of new guardrail products that meet the NCHRP 350 crash testing criteria. Several of these products have undergone extensive changes since initially being introduced and the most recent version of the products was reviewed. We are requesting your approval of our Public Interest Finding as described in the following paragraphs.

Impact Attenuators

We request proprietary use of the Quadguard System from Energy Absorption Systems, Inc. and the Trinity Attenuating Crash Cushion (TRACC) from Trinity Industries as our primary means of terminating rigid barriers in median applications and other installations where it is deemed essential to have a crash cushion system in place. This determination is supported by the following reasons:

1 The Quadguard System is very similar to the GREAT System previously used in Montana . The Montana Department of Transportation is familiar with this type of technology and hardware which aides in the timely repair of damaged systems. The TRACC has similar attributes, which include reuse of frame and fender panels after impact and quick replacement of damaged parts.

2. The Quadguard and TRACC are capable of absorbing a glancing blow and/or minor impact and still have the ability to properly function with an end-on impact.

3. The Quadgaurd and TRACC are non-gating systems that do not allow vehicles to pass through or beyond the system. This is critical in a median application where a gating system could allow an errant vehicle to pass through into the opposing lane or lanes of traffic.

4. The Quadgaurd and TRACC systems connect directly to the rigid barrier system without the use of transitional sections. This reduces the overall length of the system, which is critical in some installations. The lack of transitional sections also reduces the risk of pocketing or trapping a vehicle in the transition area.

5 The Quadguard and TRACC systems provide for safer maintenance operations during their repair as it takes less time to repair them than other systems that use specialized posts and rail elements.

W-Beam Terminal Sections

We request proprietary use of the ET-Plus terminal end section from Trinity Industries and the Sequential Kinking Terminal (SKT) from Road Systems, Inc. on w-beam guardrail. These two terminal sections have evolved from the ET-2000 and BEST terminal sections that were approved in our previous Public Interest Finding and incorporate better performing features into their latest designs.

We have selected to use the optional Hinged Breakaway (HBA) steel posts exclusively in new installations for both the ET-Plus and SKT terminals. This option was selected due to previously encountered extruder head fastening problems witnessed during routine MDT maintenance inspections.

This determination is supported by the following reasons:

1. Both terminal sections can be installed tangent to the roadway with no flare. This reduces the need for costly grading on many installations, especially in retrofit locations.

2. Both terminal sections use a majority of standard hardware, which is familiar to our maintenance personnel.

3 Both terminal sections have reusable extruder heads that allow for quick repair of damaged end sections.

4 The construction, design, and maintenance requirements of both terminal sections are similar to previously used systems and will not require significant training or expertise.

Steel Box Beam Terminal Sections

We request proprietary use of the WYBET terminal end section from Trinity Industries and the BEAT terminal end section from Road Systems, Inc. on box beam guardrail. This determination is supported by the following reasons:

Both terminal sections can be installed tangent to the roadway with no flare. This significantly reduces grading costs.

2. Both terminal sections attach to box beam rail with no special connections or transition sections.

3 Both terminal sections have a nosepiece that is normally reusable and allows for quick repair of damaged end sections.

Future Products

If additional impact attenuator or guardrail end treatments become available in the future that meet our criteria and do not hamper the consistency of current hardware in use, MDT will evaluate them to determine whether they may be used on the Montana State Highway System.

If you have any questions, please call me at 444-6242.

Carl S. Peil

Carl S. Peil, P.E.
Preconstruction Engineer

Approved:

for Janice Weingart Brown
Division Administrator
Federal Highway Administration

3/18/02
Date

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Copies: C. S. Peil, R. D. Morgan, M. A. Wissinger, J. M. Marshik, D. J. Blacker, J. P. Kolman, J. A. Walther, District Administrators, R. E. Williams